

=> fil reg
FILE 'REGISTRY' ENTERED AT 16:22:12 ON 18 MAR 2008
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STRUCTURE FILE UPDATES: 17 MAR 2008 HIGHEST RN 1008496-49-8
DICTIONARY FILE UPDATES: 17 MAR 2008 HIGHEST RN 1008496-49-8

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TSCA INFORMATION NOW CURRENT THROUGH January 9, 2008.

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

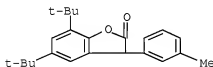
<http://www.cas.org/support/stngen/stndoc/properties.html>

=> d ide can tot 17

L7 ANSWER 1 OF 10 REGISTRY COPYRIGHT 2008 ACS on STN
RN 201815-03-4 REGISTRY
ED Entered STN: 25 Feb 1998
CN 2(3H)-Benzofuranone, 5,7-bis(1,1-dimethylethyl)-3-[2,3(or
3,4)-dimethylphenyl]- (CA INDEX NAME)

OTHER NAMES:

CN HP 136
CN Irganox HP 136
MF C24 H30 O2
CI IDS, COM
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL



D1-Me

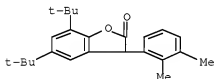
122 REFERENCES IN FILE CA (1907 TO DATE)
122 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 148:225728

REFERENCE 2: 148:204803

REFERENCE 3: 148:155630
REFERENCE 4: 148:132234
REFERENCE 5: 148:109260
REFERENCE 6: 148:101375
REFERENCE 7: 148:55942
REFERENCE 8: 148:55933
REFERENCE 9: 147:486942
REFERENCE 10: 147:428153

L7 ANSWER 2 OF 10 REGISTRY COPYRIGHT 2008 ACS on STN
RN 169198-26-9 REGISTRY
ED Entered STN: 20 Oct 1995
CN 2(3H)-Benzofuranone, 5,7-bis(1,1-dimethylethyl)-3-(2,3-dimethylphenyl)-
(CA INDEX NAME)
OTHER NAMES:
CN 5,7-Bis(tert-butyl)-3-(2,3-dimethylphenyl)-3H-benzofuran-2-one
CN 5,7-Di-tert-butyl-3-(2,3-dimethylphenyl)-2(3H)-benzofuranone
CN 5,7-Di-tert-butyl-3-(2,3-dimethylphenyl)-3H-benzofuran-2-one
MF C24 H30 O2
CI COM
SR CA
LC STN Files: CA, CAPLUS, CHEMLIST, USPAT2, USPATFULL
Other Sources: TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



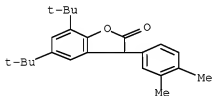
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

36 REFERENCES IN FILE CA (1907 TO DATE)
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REFERENCE 1: 148:178963
REFERENCE 2: 147:511809
REFERENCE 3: 147:511279
REFERENCE 4: 147:437021
REFERENCE 5: 146:82624
REFERENCE 6: 145:104487

REFERENCE 7: 144:273841
REFERENCE 8: 144:43169
REFERENCE 9: 143:249083
REFERENCE 10: 143:154613

L7 ANSWER 3 OF 10 REGISTRY COPYRIGHT 2008 ACS on STN
RN 164391-52-0 REGISTRY
ED Entered STN: 06 Jul 1995
CN 2(3H)-Benzofuranone, 5,7-bis(1,1-dimethylethyl)-3-(3,4-dimethylphenyl)-
(CA INDEX NAME)
OTHER NAMES:
CN 5,7-Di-tert-butyl-3-(3,4-dimethylphenyl)-2(3H)-benzofuranone
CN 5,7-Di-tert-butyl-3-(3,4-dimethylphenyl)-3H-benzofuran-2-one
MF C24 H30 O2
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT, CHEMLIST, TOXCENTER, USPAT2, USPATFULL
Other Sources: TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

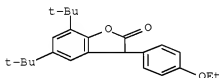


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REFERENCE 7: 147:487296
REFERENCE 8: 147:487099
REFERENCE 9: 147:437021
REFERENCE 10: 147:144501

L7 ANSWER 4 OF 10 REGISTRY COPYRIGHT 2008 ACS on STN
RN 155811-15-7 REGISTRY
ED Entered STN: 17 Jun 1994
CN 2(3H)-Benzofuranone, 5,7-bis(1,1-dimethylethyl)-3-(4-ethoxyphenyl)- (CA INDEX NAME)
OTHER NAMES:
CN 5,7-Di-tert-butyl-3-(4-ethoxyphenyl)benzofuran-2-one
MF C24 H30 O3
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPAT2, USPATFULL

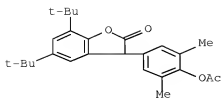


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9 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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REFERENCE 2: 146:423000
REFERENCE 3: 145:104487
REFERENCE 4: 141:295685
REFERENCE 5: 141:70644
REFERENCE 6: 137:263786
REFERENCE 7: 137:79675
REFERENCE 8: 128:116258
REFERENCE 9: 121:36914

L7 ANSWER 5 OF 10 REGISTRY COPYRIGHT 2008 ACS on STN
RN 155810-89-2 REGISTRY
ED Entered STN: 17 Jun 1994
CN 2(3H)-Benzofuranone, 3-[4-(acetyloxy)-3,5-dimethylphenyl]-5,7-bis(1,1-dimethylethyl)- (CA INDEX NAME)
OTHER NAMES:
CN 3-(4-Acetoxy-3,5-dimethylphenyl)-5,7-di-tert-butylbenzofuran-2-one
MF C26 H32 O4
SR CA
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 145:104487

REFERENCE 2: 141:70644

REFERENCE 3: 137:263786

REFERENCE 4: 137:79675

REFERENCE 5: 121:36913

L7 ANSWER 6 OF 10 REGISTRY COPYRIGHT 2008 ACS on STN

RN 155794-36-8 REGISTRY

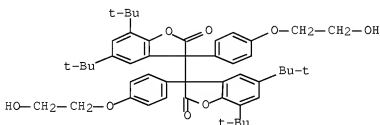
ED Entered STN: 17 Jun 1994

CN [3,3'-Bibenzofuran]-2,2'(3H,3'H)-dione, 5,5',7,7'-tetrakis(1,1-dimethylethyl)-3,3'-bis[4-(2-hydroxyethoxy)phenyl]- (CA INDEX NAME)

MF C48 H58 O8

SR CA

LC STN Files: CA, CAPLUS, USPAT2, USPATFULL



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3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

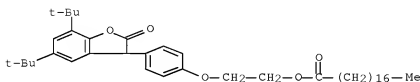
REFERENCE 1: 141:70644

REFERENCE 2: 137:79675

REFERENCE 3: 121:35314

L7 ANSWER 7 OF 10 REGISTRY COPYRIGHT 2008 ACS on STN

RN 155794-08-4 REGISTRY
 ED Entered STN: 17 Jun 1994
 CN Octadecanoic acid, 2-[4-[5,7-bis(1,1-dimethylethyl)-2,3-dihydro-2-oxo-3-benzofuranyl]phenoxy]ethyl ester (CA INDEX NAME)
 OTHER NAMES:
 CN 5,7-Di-tert-butyl-3-[4-(2-stearoyloxyethoxy)phenyl]benzofuran-2-one
 MF C42 H64 O5
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1907 TO DATE)
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REFERENCE 1: 145:104487

REFERENCE 2: 141:70644

REFERENCE 3: 137:263786

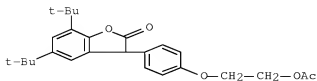
REFERENCE 4: 137:79675

REFERENCE 5: 129:190510

REFERENCE 6: 128:116258

REFERENCE 7: 121:35314

L7 ANSWER 8 OF 10 REGISTRY COPYRIGHT 2008 ACS on STN
 RN 155794-08-4 REGISTRY
 ED Entered STN: 17 Jun 1994
 CN 2(3H)-Benzofuranone, 3-[4-[2-(acetoxy)ethoxy]phenyl]-5,7-bis(1,1-dimethylethyl)- (CA INDEX NAME)
 OTHER NAMES:
 CN 3-[4-(2-Acetoxyethoxy)phenyl]-5,7-di-tert-butylbenzofuran-2-one
 CN PS 675
 MF C26 H32 O5
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

11 REFERENCES IN FILE CA (1907 TO DATE)
11 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 145:104487
REFERENCE 2: 141:70644
REFERENCE 3: 137:263786
REFERENCE 4: 137:79675
REFERENCE 5: 129:331553
REFERENCE 6: 129:190510
REFERENCE 7: 128:116258
REFERENCE 8: 126:331493
REFERENCE 9: 126:306116
REFERENCE 10: 123:256501

L7 ANSWER 9 OF 10 REGISTRY COPYRIGHT 2008 ACS on STN

RN 150046-35-8 REGISTRY

ED Entered STN: 16 Sep 1993

CN Propanoic acid, 2,2-dimethyl-, 4-[5,7-bis(1,1-dimethylethyl)-2,3-dihydro-2-oxo-3-benzofuranyl]-2,6-dimethylphenyl ester (CA INDEX NAME)

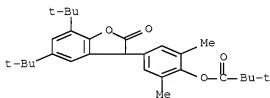
OTHER NAMES:

CN 3-(3,5-Dimethyl-4-pivaloyloxyphenyl)-5,7-di-tert-butylbenzofuran-2-one

MF C29 H38 O4

SR CA

LC STN Files: CA, CAPLUS, USPAT2, USPATFULL



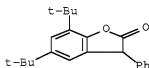
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

9 REFERENCES IN FILE CA (1907 TO DATE)
9 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 145:104487
REFERENCE 2: 141:70644
REFERENCE 3: 137:263786

REFERENCE 4: 137:79675
REFERENCE 5: 132:315779
REFERENCE 6: 129:190510
REFERENCE 7: 128:116258
REFERENCE 8: 121:36913
REFERENCE 9: 119:141129

L7 ANSWER 10 OF 10 REGISTRY COPYRIGHT 2008 ACS on STN
RN 66737-86-8 REGISTRY
ED Entered STN: 16 Nov 1984
CN 2(3H)-Benzofuranone, 5,7-bis(1,1-dimethylethyl)-3-phenyl- (CA INDEX NAME)
OTHER NAMES:
CN 5,7-Di-tert-butyl-3-phenyl-2-coumaranone
CN 5,7-Di-tert-butyl-3-phenyl-3H-benzofuran-2-one
MF C22 H26 O2
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMLIST, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

44 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
44 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 148:178963
REFERENCE 2: 147:551368
REFERENCE 3: 147:437021
REFERENCE 4: 146:423000
REFERENCE 5: 146:411157
REFERENCE 6: 146:143468
REFERENCE 7: 146:82624
REFERENCE 8: 144:293642
REFERENCE 9: 144:273841

REFERENCE 10: 142:57336

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 16:22:24 ON 18 MAR 2008

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FILE COVERS 1907 - 18 Mar 2008 VOL 148 ISS 12

FILE LAST UPDATED: 17 Mar 2008 (20080317/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

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L37 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS ON STN

AN 2004:534284 HCAPLUS Full-text

DN 141:70644

ED Entered STN: 02 Jul 2004

TI Antioxidant arylbenzofuranones and other substances for edible fats, oils and foods and feeds containing these materials.

IN Seltzer, Raymond; Revichandran, Ramanathan

PA Ciba Specialty Chemicals Holding Inc., Switz.

SO PCT Int. Appl., 47 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C1189905-00

CC 17-9 (Food and Feed Chemistry)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004055141	A2	20040701	WO 2003-EP50954	20031208 <--
	WO 2004055141	A3	20041209		
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	RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	AU 2003302176	A1	20040709	AU 2003-302176	20031208 <--

EP 1571928	A2	20050914	EP 2003-809982	20031208 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1726026	A	20060125	CN 2003-80106496	20031208 <--
BR 2003017474	A	20060207	BR 2003-17474	20031208 <--
JP 2006510362	T	20060330	JP 2004-560500	20031208 <--
US 2006051478	A1	20060309	US 2005-538891	20050614 <--
MX 2005PA06544	A	20050816	MX 2005-PA6544	20050617 <--
IN 2005CN01591	A	20070907	IN 2005-CN1591	20050712 <--
PRAI US 2002-434715P	P	20021218	<--	
WO 2003-EP50954	W	20031208	<--	

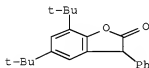
CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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	IPCR	A23K0003-00 [I,C*]; A23K0003-00 [I,A]; A23L0003-3463 [I,C*]; A23L0003-3499 [I,A]; A23L0003-3544 [I,A]; C11B0005-00 [I,C*]; C11B0005-00 [I,A]
AU 2003302176	ECLA	A23K003/00; A23L003/3499; A23L003/3544; C11B005/00S
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EP 1571928	IPCI	A23L0003-34 [ICM,7]; A23K0001-16 [ICS,7]; C11B0005-00 [ICS,7]; A23D0009-00 [ICS,7]
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CN 1726026	IPCI	A61K0031-34 [I,A]; C07D0307-77 [I,A]; C07D0307-00 [I,C*]
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JP 2006510362	IPCI	A23D0009-06 [I,A]; A23K0001-16 [I,A]; A23K0001-18 [I,A]; A23L0003-3544 [I,A]; A23L0003-3463 [I,C*]; C09K0015-06 [I,A]; C09K0015-18 [I,A]; C09K0015-26 [I,A]; C09K0015-00 [I,C*]; C11B0005-00 [I,A]
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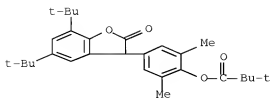
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		ECLA	K23V	
MX	2005PA06544	IPCI	A23D0009-00 [ICM,7]; A23K0001-16 [ICS,7]; A23L0003-34 [ICS,7]; A23L0003-35 [ICS,7]; A23L0003-3508 [ICS,7]; A23L0003-3463 [ICS,7,C*]; C11B0005-00 [ICS,7]	<--
IN	2005CN01591	IPCI	A23L0003-34 [ICM,7]	<--
OS	MARPAT 141:70644			
AB	A combination of one or more compds. selected from the group consisting of 3-arylbenzofuranones, long chain N,N-dialkylhydroxylamines, substituted hydroxylamines, nitrones, and amine oxides is highly effective as an antioxidant for use with edible organic substances subject to deterioration by oxidation			
ST	antioxidant arylbenzofuranone dialkylhydroxylamine hydroxylamine nitrone fat oil feed food			
IT	Antioxidants Coloring materials Emulsifying agents Feed additives Food preservatives Oxidation (antioxidant arylbenzofuranones and other substances for edible fats, oils and foods and feeds containing these materials)			
IT	Corn oil Edible oils Fats and Glyceridic oils, biological studies RL: BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses) (antioxidant arylbenzofuranones and other substances for edible fats, oils and foods and feeds containing these materials)			
IT	Amine oxides Nitrones Phosphites Tocopherols RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses) (antioxidant arylbenzofuranones and other substances for edible fats, oils and foods and feeds containing these materials)			
IT	Alcohols, biological studies RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses) (antioxidant esters containing; antioxidant arylbenzofuranones and other substances for edible fats, oils and foods and feeds containing these materials)			
IT	Rosmarinus officinalis (extract; antioxidant arylbenzofuranones and other substances for edible fats, oils and foods and feeds containing these materials)			
IT	Food (fatty; antioxidant arylbenzofuranones and other substances for edible fats, oils and foods and feeds containing these materials)			
IT	Glycerides, biological studies RL: BSU (Biological study, unclassified); BIOL (Biological study) (foods and feeds containing; antioxidant arylbenzofuranones and other substances for edible fats, oils and foods and feeds containing these materials)			
IT	Feed (pet; antioxidant arylbenzofuranones and other substances for edible fats, oils and foods and feeds containing these materials)			
IT	Alcohols, biological studies RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses) (polyhydric, antioxidant esters containing; antioxidant arylbenzofuranones			

and other substances for edible fats, oils and foods and feeds containing these materials)

- IT Amine oxides
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(tertiary; antioxidant arylbenzofuranones and other substances for edible fats, oils and foods and feeds containing these materials)
- IT 50-81-7, Vitamin C, biological studies 128-37-0, BHT, biological studies 1611-03-6D, 3,5-Di-tert-butyl-4-hydroxyphenylacetic acid, esters 1948-33-0, TBHQ 3376-26-9, N-Benzyl- α -phenylnitron 6881-57-8D, Benzyl phosphonic acid, derivs. 7803-49-8D, Hydroxylamine, N,N-di(hydrogenated tallow) derivs. 7803-49-8D, Hydroxylamine, long-chain N,N-dialkyl- and other substituted derivs. 20170-32-5D, β -(3,5-Di-tert-butyl-4-hydroxyphenyl)propionic acid, esters 22606-42-4D, tallow derivs. 24794-55-6D, esters 25013-16-5, BHA 49801-05-0D, di(C12-C14) derivs. 66737-86-8 70524-55-9, N-Ethyl- α -methylnitron 111783-83-6D, Benzofuranone, 3-aryl derivs. 137359-61-6, O-Allyl-N,N-diocetadecyl hydroxylamine 150046-35-8 155794-02-8 155794-08-4 155794-36-8 155810-89-2 155811-15-7 164391-52-0 169198-26-9 243655-78-9D, esters 339529-04-3, N-Octyl- α -heptylnitron 439945-17-2, N-Lauryl- α -undecylnitron 439945-19-4, N-Tetradecyl- α -tridecylnitron 439945-20-7, N-Hexadecyl- α -pentadecylnitron 439945-21-8, N-Hexadecyl- α -heptadecylnitron 439945-23-0, N-Heptadecyl- α -heptadecylnitron 439945-24-1, n-Octadecyl- α -hexadecylnitron 439945-25-2, N-Methyl- α -heptadecylnitron 454168-41-3, O-n-Propyl-N,N-diocetadecyl hydroxylamine 713110-38-4
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(antioxidant arylbenzofuranones and other substances for edible fats, oils and foods and feeds containing these materials)
- IT 123250-74-8, Irgastab FS-042 201815-03-4, Irganox HP-136
RL: RCT (Reactant); RACT (Reactant or reagent)
(antioxidant arylbenzofuranones and other substances for edible fats, oils and foods and feeds containing these materials)
- IT 66737-86-8 150046-35-8 155794-02-8 155794-08-4 155794-36-8 155810-89-2 155811-15-7 164391-52-0 169198-26-9
RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)
(antioxidant arylbenzofuranones and other substances for edible fats, oils and foods and feeds containing these materials)
- RN 66737-86-8 HCAPLUS
CN 2(3H)-Benzofuranone, 5,7-bis(1,1-dimethylethyl)-3-phenyl- (CA INDEX NAME)

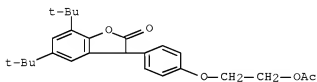


- RN 150046-35-8 HCAPLUS
CN Propanoic acid, 2,2-dimethyl-, 4-[5,7-bis(1,1-dimethylethyl)-2,3-dihydro-2-oxo-3-benzofuran-1-yl]-2,6-dimethylphenyl ester (CA INDEX NAME)



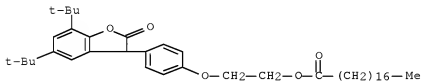
RN 155794-02-8 HCAPLUS

CN 2(3H)-Benzofuranone, 3-[4-[2-(acetyloxy)ethoxy]phenyl]-5,7-bis(1,1-dimethylethyl)- (CA INDEX NAME)



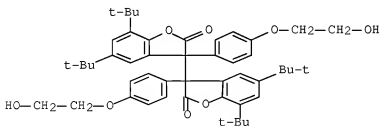
RN 155794-08-4 HCAPLUS

CN Octadecanoic acid, 2-[4-[5,7-bis(1,1-dimethylethyl)-2,3-dihydro-2-oxo-3-benzofuranyl]phenoxy]ethyl ester (CA INDEX NAME)



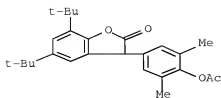
RN 155794-36-8 HCAPLUS

CN [3,3'-Bibenzofuran]-2,2' (3H,3'H)-dione, 5,5',7,7'-tetrakis(1,1-dimethylethyl)-3,3'-bis[4-(2-hydroxyethoxy)phenyl]- (CA INDEX NAME)

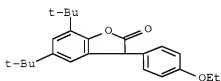


RN 155810-89-2 HCAPLUS

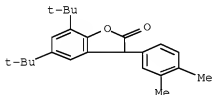
CN 2 (3H)-Benzofuranone, 3-[4-(acetyloxy)-3,5-dimethylphenyl]-5,7-bis(1,1-dimethylethyl)- (CA INDEX NAME)



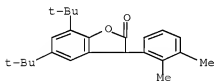
RN 155811-15-7 HCAPLUS
 CN 2(3H)-Benzofuranone, 5,7-bis(1,1-dimethylethyl)-3-(4-ethoxyphenyl)- (CA INDEX NAME)



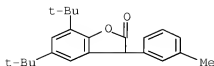
RN 164391-52-0 HCAPLUS
 CN 2(3H)-Benzofuranone, 5,7-bis(1,1-dimethylethyl)-3-(3,4-dimethylphenyl)- (CA INDEX NAME)



RN 169198-26-9 HCAPLUS
 CN 2(3H)-Benzofuranone, 5,7-bis(1,1-dimethylethyl)-3-(2,3-dimethylphenyl)- (CA INDEX NAME)



IT 201815-03-4, Irganox HP-136
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (antioxidant arylbenzofuranones and other substances for edible fats,
 oils and foods and feeds containing these materials)
 RN 201815-03-4 HCAPLUS
 CN 2(3H)-Benzofuranone, 5,7-bis(1,1-dimethylethyl)-3-[2,3(or 3,4)-dimethylphenyl]- (CA INDEX NAME)



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L38 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 2004:1125652 HCAPLUS [Full-text](#)

DN 142:57786

TI Modified poly(ethylene terephthalate) (PET) with less aldehydes and manufacture thereof

IN Mamyoda, Takahiro; Hiraoka, Shoji

PA Mitsui Chemicals Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

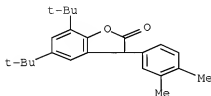
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004359907	A	20041224	JP 2003-162946	20030606 <--
PRAI	JP 2003-162946		20030606	<--	
AB	Melt PET (A), prepared by esterification of terephthalic acid and ethylene glycol and subsequent condensation polymerization in melt state, are blended with melt additives (B) chosen from hindered phenols, lactones, and/or P-based stabilizers and granulated to give chip-like modified PET, showing no acetaldehyde odor and useful for beverage bottles. After the granulation, the modified PET may be annealed at temperature lower than m.p. to increase intrinsic viscosity. Thus, ethylene glycol, isophthalic acid, and terephthalic acid were esterified and polymerized to give polyester. Part of the polyester was mixed with pentaerythritol tetrakis[3-(3,5-di-tert-butyl-4-hydroxyphenyl) propionate] (Irganox 1010) to give a master batch, which was melt blended with the residue of the polyester, cut into chips, crystallized, solid polymerized, and molded to give a bottle showing acetaldehyde concentration 7.2 ppm.				
IC	ICM C08J0003-20				
CC	ICS C08K0005-13; C08K0005-151; C08K0005-49; C08L0067-02				
	38-3 (Plastics Fabrication and Uses)				
	Section cross-reference(s): 17				
IT	6683-19-8, Irganox 1010		31570-04-4, Irgafos 168	164391-52-0,	
	5,7-Di-tert-butyl-3-(3,4-dimethylphenyl)-3H-benzofuran-2-one				
	RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); BIOL (Biological study); PROC (Process); USES (Uses)				
	(stabilizers; manufacture of aldehyde odor-free modified PET for beverage bottles by blending with stabilizers)				
IT	164391-52-0, 5,7-Di-tert-butyl-3-(3,4-dimethylphenyl)-3H-benzofuran-2-one				
	RL: FFD (Food or feed use); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); BIOL (Biological study); PROC (Process); USES (Uses)				

(stabilizers; manufacture of aldehyde odor-free modified PET for beverage bottles by blending with stabilizers)

RN 164391-52-0 HCAPLUS

CN 2(3H)-Benzofuranone, 5,7-bis(1,1-dimethylethyl)-3-(3,4-dimethylphenyl)-
(CA INDEX NAME)



L38 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 2003:559904 HCAPLUS [Full-text](#)

DN 139:118387

TI Rubber-modified styrene polymer compositions with good mold releasability and their injection-blow-molded products

IN Kawasaki, Toshiharu; Miura, Shinichi

PA PS Japan K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003206384	A	20030722	JP 2002-7544	20020116 <--
PRAI	JP 2002-7544		20020116	<--	
OS	MARPAT 139:118387				

AB The compns., useful for food containers, etc., comprise (a) 100 parts styrene polymers containing dispersed rubber particles, (b) 0.006-0.5 part 3-R1-substituted 4-7-R2-R5-substituted benzofuranone [R1 = (un)substituted (hetero)cyclic aromatic group; R2-R5 = H, C1-5 alkyl], and (c) 0.02-0.5 part higher fatty acid metal salts and higher fatty acids. Thus, a composition containing (a) 100 parts styrene polymer containing 4.5% Diene 55 (rubber particle, average particle size 3.4 μ m), (b) 0.05 part 5,7-di-tert-butyl-3-(3,4-dimethylphenyl)-3H-benzofuran-2-one, (c) 0.2 part calcium stearate, and (d) 0.1 part stearic acid was injection-blow-molded to give a container for milk with improved continuous moldability and reduced black foreign matters.

IC ICM C08L0051-04

ICS B29C0049-00; C08J0005-00; C08K0005-09; C08K0005-098; C08K0005-1535; B29K0021-00; B29K0055-02; B29K0105-16

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 17, 27, 39

IT 164391-51-9P 164391-52-0E, 5,7-Di-tert-butyl-3-(3,4-dimethylphenyl)-3H-benzofuran-2-one

RL: FFD (Food or feed use); IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)

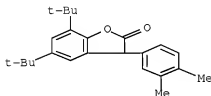
(heat stabilizer; preparation of heat stabilizers for rubber-modified styrene polymer compns.)

IT 164391-52-0P, 5,7-Di-tert-butyl-3-(3,4-dimethylphenyl)-3H-benzofuran-2-one

RL: FFD (Food or feed use); IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(heat stabilizer; preparation of heat stabilizers for rubber-modified styrene polymer comps.)

RN 164391-52-0 HCAPLUS

CN 2(3H)-Benzofuranone, 5,7-bis(1,1-dimethylethyl)-3-(3,4-dimethylphenyl)-
(CA INDEX NAME)



L38 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 2002:736320 HCAPLUS [Full-text](#)

DN 137:263786

TI Synergistic flame retardant compositions for polymers

IN Troutman, Malisa V.; Ravichandran, Ramanathan; Srinivasan, Rangarajan; King, Roswell Easton; Horsey, Douglas Wayne

PA Ciba Specialty Chemicals Holding Inc., Switz.

SO PCT Int. Appl., 70 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002074847	A1	20020926	WO 2002-EP2706	20020312 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2440904	A1	20020926	CA 2002-2440904	20020312 <--
	AU 2002302417	A1	20021003	AU 2002-302417	20020312 <--
	EP 1379584	A1	20040114	EP 2002-729995	20020312 <--
	EP 1379584	B1	20050824		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	CN 1498244	A	20040519	CN 2002-807076	20020312 <--
	JP 2004526837	T	20040902	JP 2002-573849	20020312 <--
	AT 302814	T	20050915	AT 2002-729995	20020312 <--
	ES 2247332	T3	20060301	ES 2002-729995	20020312 <--
	US 2004097619	A1	20040520	US 2003-471947	20030916 <--
	US 7084196	B2	20060801		
	IN 2003CN01475	A	20051125	IN 2003-CN1475	20030918 <--
	US 2006084731	A1	20060420	US 2005-296686	20051207 <--
PRAI	US 2001-277222P	P	20010320	<--	

WO 2002-EP2706 W 20020312 <--
 US 2003-471947 A1 20030916 <--

OS MARPAT 137:263786

AB Polymeric substrates, for example polyolefins such as polypropylene, can be made flame retardant by the incorporation therein of a synergistic mixture of (i.) at least one compound selected from the group consisting of nitroxyl stabilizers, hydroxylamine stabilizers, nitron stabilizers, substituted hydroxylamine stabilizers, amine oxide stabilizers, benzofuranone stabilizers, phosphite and phosphonite stabilizers, quinone methide stabilizers and monoacrylate esters of 2,2'-alkylidenebisphenol stabilizers and (ii.) at least one compound selected from the group consisting of brominated flame retardants, phosphorus containing flame retardants and inorg. flame retardants such as ammonium polyphosphate or decabromodiphenyl oxide; wherein the amount of organic or inorg. flame retardant of component (ii.) required to achieve an acceptable level of flame retardancy is significantly reduced compared to that needed when component (i.) is not present.

IC ICM C08K0005-00
 ICS C08K0005-3435

CC 37-6 (Plastics Manufacture and Processing)

IT 2226-96-2, 4-Hydroxy-1-oxyl-2,2,6,6-tetramethylpiperidine 2516-88-3,
 Bis(1-oxyl-2,2,6,6-tetramethylpiperidin-4-yl)succinate 2516-91-8,
 Bis(1-oxyl-2,2,6,6-tetramethylpiperidin-4-yl) terephthalate 2564-83-2
 2564-88-7 2896-70-0 3225-26-1, 1-Oxyl-2,2,6,6-tetramethylpiperidin-4-yl benzoate 3229-53-6 3376-26-9, N-Benzyl- α -phenylnitron
 3551-21-1, Bis(1-oxyl-2,2,6,6-tetramethylpiperidin-4-yl) isophthalate
 3936-30-9, Bis(1-oxyl-2,2,6,6-tetramethylpiperidin-4-yl)phthalate
 4359-97-1 6599-87-7 7019-94-5 7062-57-9 7078-98-0 7803-49-8D,
 Hydroxylamine, derivs. 14691-89-5 22977-67-9 40289-91-6 61167-58-6
 65559-25-3 70524-55-9, N-Ethyl- α -methylnitron 71711-98-3
 77432-44-1, 4,4'-Ethylenebis(1-oxyl-2,2,6,6-tetramethylpiperazin-3-one)
 86878-55-9 86878-57-1 94271-84-8, N-(1-Oxyl-2,2,6,6-
 tetramethylpiperidin-4-yl)caprolactam 97116-04-6 104056-68-0
 123373-68-2 128893-72-1 132207-24-0, 1-Oxyl-2,2,6,6-
 tetramethylpiperidin-4-yl 4-tert-butyl-benzoate 132392-95-1
 156046-35-8 153784-60-2, 1-Oxyl-2,2,6,6-tetramethylpiperidin-4-
 yl 2-ethylhexanoate 153784-61-3, Bis(1-oxyl-2,2,6,6-tetramethylpiperidin-
 4-yl) n-butylmalonate 153784-62-4, Bis(1-oxyl-2,2,6,6-
 tetramethylpiperidin-4-yl)hexahydroterephthalate 154186-11-5
 155794-02-8 155794-06-2 155794-08-4
 155810-89-2 155811-35-7 164391-52-9
 169198-26-9 179552-47-7 179552-48-8, 2,4,6-Tris-[N-butyl-N-(1-
 oxyl-2,2,6,6-tetramethylpiperidin-4-yl)]-s-triazine 183666-73-1
 183666-75-3 183666-77-5 183666-79-7 183666-82-2 183721-31-5
 183721-32-6 183721-33-7 183721-34-8 183721-35-9 183721-36-0
 339529-04-3, N-Octyl- α -heptylnitron 433337-81-6 439945-17-2,
 N-Lauryl- α -undecylnitron 439945-19-4, N-Tetradecyl- α -
 tridecylnitron 439945-20-7, N-Hexadecyl- α -pentadecylnitron
 439945-21-8, N-Hexadecyl- α -heptadecylnitron 439945-22-9,
 N-Octadecyl- α -pentadecylnitron 439945-23-0, N-Heptadecyl- α -
 heptadecylnitron 439945-24-1 439945-25-2 461664-14-2 461664-15-3
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 461664-21-1 461664-37-9

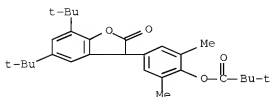
RL: MOA (Modifier or additive use); USES (Uses)
 (synergistic flame retardant compns. for polymers)

IT 150046-35-8 155794-02-8 155794-08-4
 155810-89-2 155811-35-7 164391-52-0
 169198-26-9

RL: MOA (Modifier or additive use); USES (Uses)
 (synergistic flame retardant compns. for polymers)

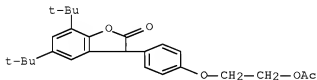
RN 150046-35-8 HCAPLUS

CN Propanoic acid, 2,2-dimethyl-, 4-[5,7-bis(1,1-dimethylethyl)-2,3-dihydro-2-oxo-3-benzofuranyl]-2,6-dimethylphenyl ester (CA INDEX NAME)



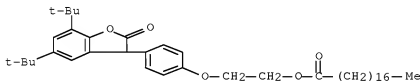
RN 155794-02-8 HCAPLUS

CN 2(3H)-Benzofuranone, 3-[4-[2-(acetyloxy)ethoxy]phenyl]-5,7-bis(1,1-dimethylethyl)- (CA INDEX NAME)



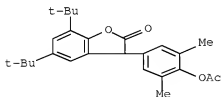
RN 155794-08-4 HCAPLUS

CN Octadecanoic acid, 2-[4-[5,7-bis(1,1-dimethylethyl)-2,3-dihydro-2-oxo-3-benzofuranyl]phenoxy]ethyl ester (CA INDEX NAME)



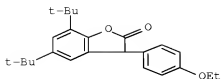
RN 155810-89-2 HCAPLUS

CN 2(3H)-Benzofuranone, 3-[4-(acetyloxy)-3,5-dimethylphenyl]-5,7-bis(1,1-dimethylethyl)- (CA INDEX NAME)

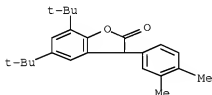


RN 155811-15-7 HCAPLUS

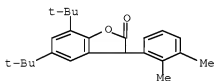
CN 2(3H)-Benzofuranone, 5,7-bis(1,1-dimethylethyl)-3-(4-ethoxyphenyl)- (CA INDEX NAME)



RN 164391-52-0 HCAPLUS
 CN 2(3H)-Benzofuranone, 5,7-bis(1,1-dimethylethyl)-3-(3,4-dimethylphenyl)-
 (CA INDEX NAME)



RN 169198-26-9 HCAPLUS
 CN 2(3H)-Benzofuranone, 5,7-bis(1,1-dimethylethyl)-3-(2,3-dimethylphenyl)-
 (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Ciba Geigy Ag	1998			IWO 9828361 A	HCAPLUS
Ciba Geigy Ag	1999			IWO 9900450 A	HCAPLUS
Nesvadba, P	1994			IUS 5369159 A	HCAPLUS
Sicken, M	1994			IUS 5326805 A	HCAPLUS

L38 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 2001:573337 HCAPLUS [Full-text](#)

DN 135:138199

TI 4-Methyl-1-pentene polymer compositions with good heat resistance and flexibility

IN Nakahara, Takashi

PA Mitsui Chemicals Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.

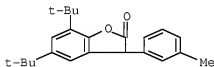
KIND

DATE

APPLICATION NO.

DATE

PI JP 2001214015 A 20010807 JP 2000-22613 20000131 <--
 PRAI JP 2000-22613 20000131 <--
 OS MARPAT 135:138199
 AB The compns., useful for food packaging materials, contain 4-methyl-1-pentene polymers and phenol acrylates and/or lactones scavenging alkyl radicals. A composition comprising a mixture of 4-methyl-1-pentene-1-tetradecene copolymer (I) 70, HV 300 (liquid polybutene) 10, 1-butene-ethylene copolymer 10, propylene-ethylene copolymer 10 parts, 0.10% (to I) Sumilizer GS, 0.15% (to I) Irganox 1010, and 2.0% (to I) zeolite was made into a film showing haze 2.0%, gloss 85%, and no odor after heating at 100° for 30 min.
 IC ICM C08L0023-20
 ICS C08K0003-00; C08K0005-00; C08K0005-134; C08K0005-1535
 CC 37-6 (Plastics Manufacture and Processing)
 Section cross-reference(s): i7
 IT Food packaging materials
 (4-Methyl-1-pentene polymer compns. with good heat resistance for)
 IT 123968-25-2, Sumilizer GS 201815-03-4, HP 136
 RL: MOA (Modifier or additive use); USES (Uses)
 (4-Methyl-1-pentene polymer compns. with good heat resistance)
 IT 201815-03-4, HP 136
 RL: MOA (Modifier or additive use); USES (Uses)
 (4-Methyl-1-pentene polymer compns. with good heat resistance)
 RN 201815-03-4 HCAPLUS
 CN 2(3H)-Benzofuranone, 5,7-bis(1,1-dimethylethyl)-3-[2,3(or 3,4)-dimethylphenyl]- (CA INDEX NAME)



D1-Me

L38 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2008 ACS ON STN
 AN 2000:236136 HCAPLUS Full-text
 DN 132:252335
 TI Thermal-stable conjugated diene polymer compositions with low unpleasant odor
 IN Yanagihara, Hiroshi; Ihara, Tomohiro
 PA Asahi Chemical Industry Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000103906	A	20000411	JP 1998-275591	19980929 <--
PRAI	JP 1998-275591		19980929 <--		
AB	Title compns., useful for food packagings, comprise 0.05-3 phr (based on 100 parts polymers) S-free hindered phenol antioxidants, 0.01-0.5 phr S-containing antioxidants (A), and 0.5-10% (based on 100 parts A) epoxides. A composition of 30:70 butadiene-styrene block copolymer 100, octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate 0.25, 2,4-bis(n-octylthiomethyl)-6-				

methylphenol 0.2, and epoxidized soya oil 0.01 part showed melt flow retention 83% (230°, 2.16-kg load, 55 min, based on 5 min residence time), low unpleasant odor, and 100° n-heptane-eluted content 230 mg.

IC ICM C08L0009-00

ICS C08K0005-13; C08K0005-15; C08K0005-36

CC 39-15 (Synthetic Elastomers and Natural Rubber)

Section cross-reference(s): 17, 38

IT Antioxidants

Food packaging materials

Heat-resistant materials

(epoxide- and antioxidant blend-containing conjugated diene rubbers with thermal stability and odor reduction for food packagings)

IT 90-66-4 123-28-4, Dilauryl 3,3'-thiodipropionate 693-36-7, Distearyl 3,3'-thiodipropionate 1709-70-2, 1,3,5-Trimethyl-2,4,6-tris(3,5-di-tert-butyl-4-hydroxybenzyl)benzene 2082-79-3, Octadecyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate 6683-19-8 16545-54-3, Dimyristyl 3,3'-thiodipropionate 29598-76-3, Pentaerythritol tetrakis(3-laurylthiopropionate) 31851-03-3, Wingstay L 35074-77-2 36443-68-2 41484-35-9 61167-58-6, 2-tert-Butyl-6-(3-tert-butyl-2-hydroxy-5-methylbenzyl)-4-methylphenyl acrylate 90498-90-1 110553-27-0 123968-25-2, 2-[1-(2-Hydroxy-3,5-di-tert-pentylphenyl)ethyl]-4,6-di-tert-pentylphenyl acrylate 146598-26-7, Isooctyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate 164391-52-0, 5,7-Di-tert-butyl-3-(3,4-dimethylphenyl)-3H-benzofuran-2-one 188793-84-2, Wingstay K

RL: MOA (Modifier or additive use); USES (Uses)

(antioxidant; epoxide- and antioxidant blend-containing conjugated diene rubbers with thermal stability and odor reduction for food packagings)

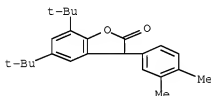
IT 164391-52-0, 5,7-Di-tert-butyl-3-(3,4-dimethylphenyl)-3H-benzofuran-2-one

RL: MOA (Modifier or additive use); USES (Uses)

(antioxidant; epoxide- and antioxidant blend-containing conjugated diene rubbers with thermal stability and odor reduction for food packagings)

RN 164391-52-0 HCAPLUS

CN 2(3H)-Benzofuranone, 5,7-bis(1,1-dimethylethyl)-3-(3,4-dimethylphenyl)-(CA INDEX NAME)



L38 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 1999:751590 HCAPLUS [Full-text](#)

DN 131:352367

TI Oxygen remover-containing polyolefin compositions and their sheets, films, laminates, and packaging containers

IN Otaki, Ryoji; Kashiba, Takashi; Ito, Yoshiki

PA Mitsubishi Gas Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

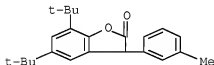
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11323032	A	19991126	JP 1999-14544	19990122 <--
	JP 3460801	B2	20031027		
PRAI	JP 1998-12908	A	19980126	<--	
AB	The compns., especially useful for food packaging films and containers, contain 10-80:20-90 mixts. of O removers and polyolefins, and 10-20,000 ppm phenolic, P-, and/or lactone-type antioxidants. Thus, pellets containing 40 parts O remover (Fe powder coated with CaCl ₂ and NaCl), 60 parts polyethylene (PE) (Novatec LD-LC 720), and 21 ppm a phenolic antioxidant (ADK Stab AO 50) were extrusion-laminated with PET, PE, and an Al foil to give a multilayer film. Rice cakes sealed in a bag from the film were not deteriorated after 1-mo storage at 25°.				
IC	ICM C08L0023-00				
ICS	A23L0003-00; A23L0003-3436; B01J0020-26; B01J0020-28; B32B0007-02; B65D0081-26; C08K0003-08; C08K0003-16; C08K0005-10; C08K0005-13; C08K0005-49				
CC	38-3 (Plastics Fabrication and Uses) Section cross-reference(s): 17				
IT	Antioxidants Bags Food packaging materials Laminated plastic films (polyolefin films containing O removers and antioxidants for (laminated) food packaging containers)				
IT	201815-03-4, HP 136 RL: FFD (Food or feed use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses) (HP 136; polyolefin films containing O removers and antioxidants for (laminated) food packaging containers)				
IT	201815-03-4, HP 136 RL: FFD (Food or feed use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses) (HP 136; polyolefin films containing O removers and antioxidants for (laminated) food packaging containers)				
RN	201815-03-4 HCAPLUS				
CN	2(3H)-Benzofuranone, 5,7-bis(1,1-dimethylethyl)-3-[2,3(or 3,4)-dimethylphenyl]- (CA INDEX NAME)				



D1—Me

L38 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
 AN 1994:435314 HCAPLUS [Full-text](#)
 DN 121:35314
 TI Preparation of 3-(2-(2-acyloxyethoxyphenyl)benzofuran-2-ones as stabilizers for organic materials.
 IN Nesvadba, Peter
 PA Ciba-Geigy A.-G., Switz.
 SO Eur. Pat. Appl., 50 pp.

CODEN: EPXXDW
 DT Patent
 LA German
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 591102	A1	19940406	EP 1993-810651	19930914 <--
	EP 591102	B1	20001018		
	R: AT, BE, DE, ES, FR, GB, IT, NL, SE				
	AT 197048	T	20001115	AT 1993-810651	19930914 <--
	ES 2151900	T3	20010116	ES 1993-810651	19930914 <--
	US 5428162	A	19950627	US 1993-124139	19930920 <--
	CA 2106607	A1	19940324	CA 1993-2106607	19930921 <--
	RU 2130931	C1	19990527	RU 1993-55138	19930921 <--
	SK 282160	B6	20011106	SK 1993-1017	19930921 <--
	CZ 289204	B6	20011212	CZ 1993-1961	19930921 <--
	ZA 9307014	A	19940323	ZA 1993-7014	19930922 <--
	CN 1087906	A	19940615	CN 1993-117880	19930922 <--
	CN 1040208	B	19981014		
	BR 9303878	A	19940329	BR 1993-3878	19930923 <--
	JP 06207041	A	19940726	JP 1993-261564	19930924 <--
	JP 3505604	B2	20040308		
PRAI	CH 1992-2979	A	19920923	<--	
OS	MARPAT 121:35314				
GI					

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title compds. [I; when m = 1, R1 = H, (O-, S-, or imino-interrupted) (phosphonate-substituted) alkanoyl, alkenoyl, cycloalkylcarbonyl, thenoyl, furoyl, (alkyl-substituted) PhCO, Q1, Q2, Q3, COR21COR11, COR22R23; when m = 2, R1 = CO, COR21CO, COR22R24R22CO; when m = 3, R1 = alkanetricarbonyl, aryltricarbonyl, Q4, Q5; when m = 4, R1 = alkanetetracarbonyl, aryltetracarbonyl; R2-R5 = H, Cl, alkyl, phenylalkyl, (substituted) Ph, cycloalkyl, alkoxy, alkylthio, OH, alkylamino, dialkylamino, alkanoyloxy, alkanoylamino, alkenoyloxy, etc.; R2R3, R3R4, R4R5 = atoms to form Ph rings; R6 = H, Q6; R7-R10 = H, alkyl, alkoxy; R11 = OH, metal alkoxide, alkoxy, amino; R17, R19, R20 = H, alkyl; R18 = H, (substituted) Ph, phenylalkyl, (O-, S-, or imino-interrupted) alkyl, etc.; R21 = bond, (O-, S-, or imino-interrupted) alkylene, alkenylene, cycloalkylene, bicycloalkylene (alkyl)phenylene, etc.; R22 = O, imino, etc.; R23 = alkyl, Ph; R24 = alkylene, cycloalkylene, phenylene; m = 1-4; n = 0-2], were prepared. Thus, 2,4-di-tert-butylphenol and 4-(2-hydroxyethoxy)mandelic acid (preparation given) were refluxed 8 h in HOAc saturated with HCl gas; the HOAc was removed in vacuo and the residue was heated at 120° with AcCl. Volatiles were again removed in vacuo and the residue was kept in MeOH at -8° to precipitate 3-[4-(2-acetoxyethoxy)phenyl]-5,7-di-tert-butylbenzofuran-2-one. The latter at 0.015% in a polypropylene composition gave a melting index after 3 extrusions of 6.1, vs. 17.1 for untreated controls.

IC ICM C07D0307-83
 ICS C07C0059-64; C08K0005-15

CC 27-6 (Heterocyclic Compounds (One Hetero Atom))
 Section cross-reference(s): 37

IT 155794-02-8P 155794-03-9P 155794-04-0P 155794-05-1P
 155794-06-2P 155794-07-3P 155794-08-4P 155794-09-5P
 155794-10-8P 155794-11-9P 155794-12-0P 155794-13-1P 155794-14-2P
 155794-15-3P 155794-16-4P 155794-17-5P 155794-18-6P 155794-19-7P

155794-20-0P 155794-21-1P 155794-22-2P 155794-23-3P 155794-24-4P
 155794-25-5P 155794-26-6P 155794-27-7P 155794-28-8P 155794-29-9P
 155794-30-2P 155794-31-3P 155794-32-4P 155794-33-5P 155794-34-6P
 155794-35-7P 155794-36-8P 155794-37-9P 155794-38-0P
 155794-39-1P 155794-40-4P 155794-41-5P 155794-42-6P 155794-43-7P
 155794-44-8P 155794-45-9P

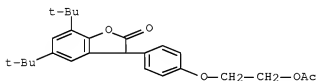
RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, as stabilizer for organic materials)

IT 155794-02-8P 155794-08-4P 155794-36-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, as stabilizer for organic materials)

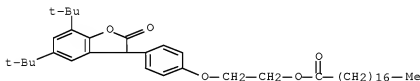
RN 155794-02-8 HCAPLUS

CN 2(3H)-Benzofuranone, 3-[4-[2-(acetyloxy)ethoxy]phenyl]-5,7-bis(1,1-dimethylethyl)- (CA INDEX NAME)



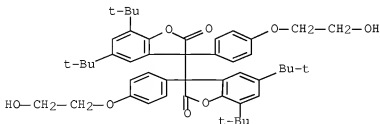
RN 155794-08-4 HCAPLUS

CN Octadecanoic acid, 2-[4-[5,7-bis(1,1-dimethylethyl)-2,3-dihydro-2-oxo-3-benzofuranyl]phenoxy]ethyl ester (CA INDEX NAME)



RN 155794-36-8 HCAPLUS

CN [3,3'-Bibenzofuran]-2,2'(3H,3'H)-dione, 5,5',7,7'-tetrakis(1,1-dimethylethyl)-3,3'-bis[4-(2-hydroxyethoxy)phenyl]- (CA INDEX NAME)



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(FILE 'HOME' ENTERED AT 15:53:25 ON 18 MAR 2008)

SET COST OFF

FILE 'HCAPLUS' ENTERED AT 15:53:38 ON 18 MAR 2008

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L1      1 S US20060051478/PN OR (US2005-538891# OR WO2003-EP50954)/AP,PRN
        E SELTZER/AU
        E SELTZER R/AU
L2      89 S E3,E4,E6
        E RAVICHANDRAN/AU
L3      136 S E63,E66
        E RAMANATHAN/AU
        E RAMANATHAN R/AU
L4      121 S E3-E5
        SEL RN L1

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FILE 'REGISTRY' ENTERED AT 15:55:52 ON 18 MAR 2008

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L5      37 S E1-E37
L6      11 S L5 AND OC4-C6/ES
L7      10 S L6 AND 46.150.18/RID
        SAV L7 DEES538/A

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FILE 'HCAPLUS' ENTERED AT 16:04:08 ON 18 MAR 2008

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L8      246 S L7
L9      30 S L8 AND PY<=2003 NOT P/DT
L10     27 S L8 AND PY<=2002 NOT P/DT
L11     134 S L8 AND (PD<=20021218 OR PRD<=20021218 OR AD<=20021208) AND P/
L12     147 S L8 AND (PD<=20031208 OR PRD<=20031208 OR AD<=20031208) AND P/
L13     177 S L9,L12
L14     161 S L10,L11
L15     6 S L13,L14 AND (FOOD? OR FEED?)/SC,SX
L16     2 S L13,L14 AND C11B005/IPC,IC,ICM,ICS,EPC
L17     4 S L13,L14 AND (FEED? OR FOOD?)/CW,CT
        E FEED/CT
L18     1 S L13,L14 AND E8+OLD,NT
L19     1 S L13,L14 AND E3+OLD,NT
        E FOOD/CT
L20     1 S L13 AND E37+OLD,NT
L21     1 S L14 AND E37+OLD,NT
L22     4 S L13,L14 AND L7(L)FFD/RL
L23     2 S L1-L4 AND L8
L24     58 S L8 AND CIBA?/CO,PA,CS
L25     52 S L13,L14 AND L24
L26     3 S L15-L23 AND L24,L25
L27     8 S L15-L23,L26
L28     5 S L27 NOT PACKAGING
L29     1 S L28 NOT PLASTIC?/SC,SX
L30     7 S L27 NOT L29
L31     2 S L13,L14 AND A23?/IPC,IC,ICM,ICS,EPC
L32     1 S L31 NOT PACKAGING
L33     1 S L29,L32
L34     7 S L30,L31 NOT L33
L35     1 S L13,L14 AND A61K/IPC,IC,ICM,ICS,EPC
L36     1 S L33,L35
L37     1 S L36 AND L1-L4,L8-L36
L38     7 S L27-L36 AND L1-L4,L8-L36 NOT L37

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FILE 'REGISTRY' ENTERED AT 16:22:12 ON 18 MAR 2008

FILE 'HCAPLUS' ENTERED AT 16:22:24 ON 18 MAR 2008

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